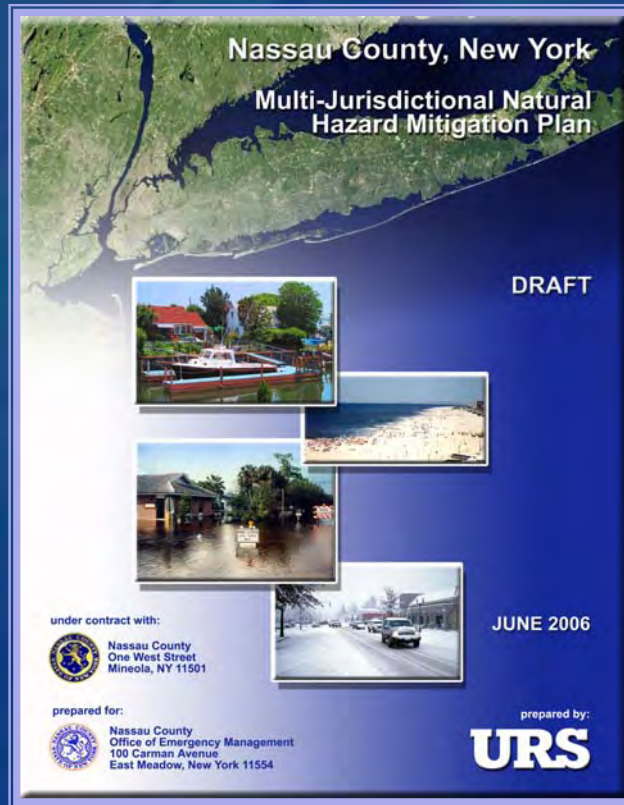




Nassau County Multi-Jurisdictional Hazard Mitigation Planning Project



Planning Group Meeting
August 15, 2006
11 am to 1 pm

The Draft Plan

Terry Winters
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Today's Agenda

- Welcome and Opening Remarks
- What is Hazard Mitigation
- Why the Plan was Developed
- Key Milestones in the Process
- Benefits of Having a Plan in Place
- Who Participated
- Roles (Participants versus Consultant)
- Overview of Plan Development Process



Today's Agenda, continued...

- Significant Hazards
- Mitigation Goals
- Types of Actions Evaluated
- Prioritization Methodology
- Draft Plan Review Cycle
- Final Plan
- Plan Maintenance
- Questions and Answers



Introduction

- Nassau County is impacted regularly by natural hazards.
- Natural hazards can cause:
 - Property loss
 - Loss of life
 - Economic hardship
 - Threats to public health and safety



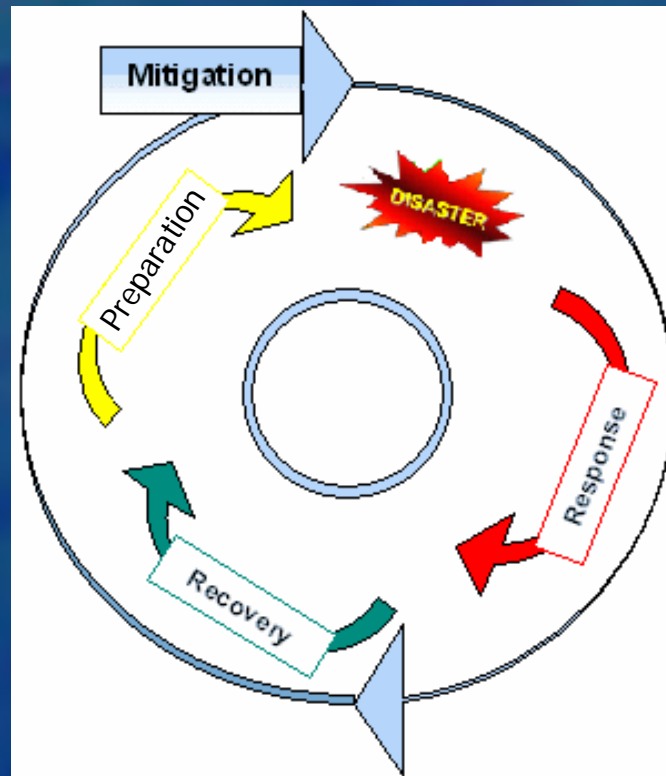


Introduction

- County commitment to disaster resistance
- Each jurisdiction in the County was invited to participate in a multi-jurisdictional process to:
 - study natural hazards,
 - evaluate hazard effects, and
 - identify **hazard mitigation** projects that can be implemented to reduce damages.



Introduction



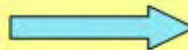
Natural disasters can't be prevented, but their impacts can be reduced through hazard mitigation.



What is hazard mitigation?

Hazard mitigation measures are actions you can undertake today to reduce your susceptibility to damages in the future.

Mitigation



Disaster Resistance



What is hazard mitigation?



Examples:

Elevating a house to reduce flood damages.

Installing hurricane clips to a roof to reduce wind damage.

Imposing setback distances to reduce erosion damages.

Modifying building codes to incorporate hazard-resistant design.



Elevated homes in Sweet Lake, LA (near Lake Charles) after Hurricane Rita (09/24/05).



Overview

- Disaster Mitigation Act of 2000
 - ◆ Requires local mitigation plan for mitigation project grants
 - ◆ Allows for multi-jurisdictional plans

- County received FEMA grant monies to develop plan
 - ◆ Plan documents process followed; approx. 1 year
 - ◆ Plan describes:
 - ◆ Evaluation of natural hazards
 - ◆ Risks
 - ◆ Actions to reduce risks





Overview

- All jurisdictions in the county invited to participate
- County-wide plan counts if jurisdiction:
 - ◆ Participated
 - AND*
 - ◆ Formally adopts
- Plan is Draft; under review



What is hazard mitigation planning?

- A process undertaken **BEFORE** a disaster strikes
- Identifying community
 - ◆ policies
 - ◆ actions, and
 - ◆ tools

for implementation in the **long-term** that will result in a reduction of risk and potential for future losses.




The Draft Plan

Nassau County, New York
Multi-Jurisdictional Natural
Hazard Mitigation Plan


DRAFT

JUNE 2006

under contract with:

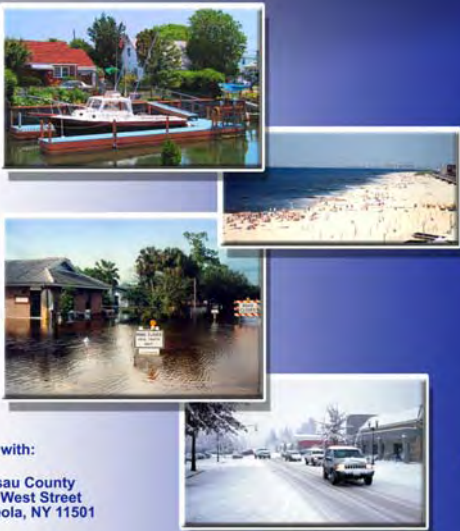
 Nassau County
One West Street
Mineola, NY 11501

prepared for:

 Nassau County
Office of Emergency Management
100 Carman Avenue
East Meadow, New York 11554

prepared by:

URS

Four small photographs are arranged in a cluster. The top-left photo shows a boat in a flooded area. The top-right photo shows a beach with people. The bottom-left photo shows a flooded street. The bottom-right photo shows a snowy road.



Why was the plan developed?

- Disaster Mitigation Act of 2000



- ◆ Local mitigation plan as a condition for hazard mitigation project grant monies



Why was the plan developed?

- Nassau County applied for, and was awarded, a PDM planning grant from FEMA (FY 2003) to prepare a multi-jurisdictional hazard mitigation plan for the County.



FY 2003 PRE-DISASTER MITIGATION PROGRAM



Key Milestones

■ Informational Session	06/16/04
■ RFP for Consultant	09/01/04
■ Consultant Under Contract	08/22/05
■ Kickoff Meeting	10/20/05
■ Other meetings:	11/14/05
	11/17/05
	11/28/05
	01/12/06
	03/09/06
	06/06/06



Key Milestones

- Web Site and Document Repositories Oct. 2005
- Fact Sheet Distributed Jan. 2006
- Legal Notice ("Newsday") 02/02/06
- Participating Jurisdictions complete and submit:
 - Hazard ID Questionnaires (various)
 - Capability Assessments (various)
 - Outreach Logs (various)

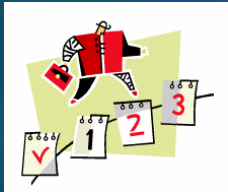


Key Milestones

- | | |
|---|----------|
| ■ Plan Maintenance and Integration Strategy | 03/09/06 |
| ■ Contractor Submits Interim Deliverables | 05/30/06 |
| ■ Goals and Mitigation Strategy | 06/06/06 |
| ■ Draft Plan | 06/11/06 |
| ■ To NYSEMO | 06/11/06 |
| ■ To Document Repositories | 07/18/06 |
| ■ On Web Site | 07/20/06 |
| ■ Receipt of NYSEMO Comments | 07/24/06 |
| ■ Comment Incorporation/Modifications | ongoing |



Benefits of Hazard Mitigation Planning



- Mitigation planning leads to judicious selection of risk reduction actions and established funding priorities.



- Implementation of mitigation actions can reduce the costs of a future disaster.



Benefits of Hazard Mitigation Planning



- Economic damages resulting from a disaster can often exceed available State and Federal aid.



- Damages can be prevented by taking the time to:
 - ◆ learn about hazards and anticipate where and how they occur; and
 - ◆ allocate resources accordingly.



Multi-Jurisdictional Approach

- Basic processes for single jurisdiction and multi-jurisdictional plans are identical.
- Difference lies in degree of complexity.





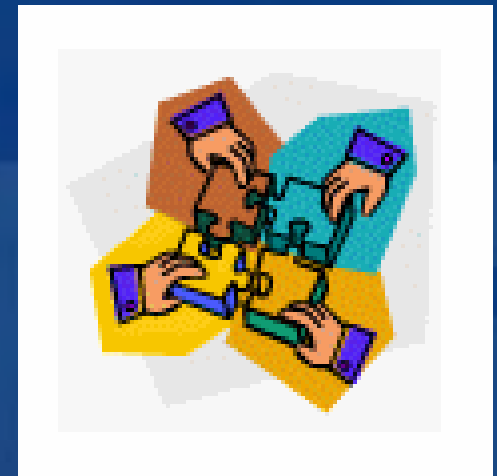
Multi-Jurisdictional Benefits

- Natural hazards do not recognize political boundaries.
- Creates economies of scale.
- Enables pooling of limited resources.



The Role of Participating Jurisdictions

- In a multi-jurisdictional plan development process, every participating jurisdiction:
 - ◆ ...contributes.
 - ◆ ...is an active participant.
 - ◆ ...has a role.
 - ◆ ...provides a piece of the puzzle.
- Plans count for jurisdictions that participate and adopt the final plan.





Participants

- County plus 69 other entities:
 - ◆ 44 towns/villages
 - ◆ 4 fire companies/departments
 - ◆ 5 school districts
 - ◆ 2 colleges/universities
 - ◆ 5 civic associations
 - ◆ 2 unincorporated areas
 - ◆ 2 utilities
 - ◆ 1 transportation agency
 - ◆ 1 village officials association
 - ◆ 1 chamber of commerce
 - ◆ 2 other



Participants

Nassau County

Atlantic Beach, Village of
Bellerose, Village of
Brookville, Village of
Centre Island, Village of
East Hills, Village of
Farmingdale, Village of
Floral Park, Village of
Flower Hill, Village of
Garden City, Village of
Glen Cove, City of
Great Neck Plaza, Village of
Hempstead, Town of
Hempstead, Village of
Hewlett Harbor, Village of
Island Park, Village of
Kings Point, Village of
Lake Success, Village of
Lattingtown, Village of
Lawrence, Village of
Long Beach, City of
Lynbrook, Village of
Malverne, Village of
Massapequa Park, Village of

Mineola, Village of
Munsey Park, Village of
Muttontown, Village of
New Hyde Park, Village of
North Hempstead, Town of
Old Brookville, Village of
Oyster Bay Cove, Village of
Plandome Heights, Village of
Plandome Manor, Village of
Plandome Village, Village of
Port Washington North, Village of
Rockville Centre, Village of
Roslyn Harbor, Village of
Roslyn, Village of
Russel Gardens, Village of
Saddle Rock, Village of
Sands Point, Village of
Sea Cliff, Village of
Stewart Manor, Village of
Valley Stream, Village of
Westbury, Village of
Albertson Fire Company
Baldwin Schools

ConEdison *

Downtown Glen Cove Business Improvement District
Freeport Schools
Great Neck Schools
Hempstead Schools
Hicksville Fire Department
Jericho Hamlet
LIPA/KeySpan
Locust Valley
Manhasset Chamber of Commerce
Massapequa Civic Association
Merrick Fire Department
Nassau Community College
Nassau County Superintendents of Buildings & Grounds Assoc.
Nassau County Village Officials Association
Nassau Shores Civic Association
New York State DOT (Long Island)
Oyster Bay Civic Association
Shoreville Park Civic Association
United States Post Office (Oyster Bay)
Williston Park Fire Department
Adelphi University
Seaford Schools



Communities Pursuing Single-Jurisdiction Plans (separately)

- Bayville, Village of
- East Rockaway, Village of
- Freeport, Village of (approved by FEMA)
- Manorhaven, Village of
- Oyster Bay, Town of (approved by FEMA)



The Role of Participating Jurisdictions

- ◆ Satisfy participation criteria
- ◆ Provide information and feedback
- ◆ Reach out to the public and other stakeholders
- ◆ Assess mitigation alternatives
- ◆ Select a course of action to be followed for their community
- ◆ Implement the plan and monitor its progress



The Role of Consultants

- ◆ Providing guidance
- ◆ Providing technical information
- ◆ Asking questions
- ◆ Seeking feedback
- ◆ Inquiring about community-specific information
- ◆ Documenting the actions of team members
- ◆ Authoring the plan using their knowledge of FEMA's mitigation planning requirements





Outreach

- Fact sheet
- Web site
- Document Repositories
- Legal Notice

NASSAU COUNTY OFFICE OF EMERGENCY MANAGEMENT
100 CARMAN AVENUE
EAST MEADOW, NY 11554
Phone 516-573-0636 Fax 516-573-0673
necem@nassaucountyny.gov

THOMAS R. SUCCOZZI
COUNTY EXECUTIVE



RICHARD A. BOTANZ
COMMISSIONER

Nassau County Multi-jurisdictional Natural Hazard Mitigation Planning Project

PLANFACTS

WHAT IS HAZARD MITIGATION?

Natural hazards have the potential to cause property loss, loss of life, economic hardship, and threats to public health and safety.

Hazard mitigation measures are essential to breaking the typical disaster cycle of damage, reconstruction, and repeated damage.

Hazard mitigation measures are the things you do today to be more protected in the future. They are measures taken before a disaster happens to reduce the impact that future disasters will have on people and property in the community. Mitigation reduces the risk of loss and creates a more disaster-resistant and sustainable community.

PURPOSE AND NEED FOR THE MITIGATION PLAN

Hazard mitigation plans are developed BEFORE a disaster strikes. The plans identify community policies, actions, and tools for long-term implementation to reduce risk and potential for future losses. Adopted, implemented and maintained on an ongoing basis, these plans will gradually, but steadily, lessen the impacts associated with hazard events in Nassau County.

As of November 1, 2004 communities that do not have a FEMA-approved hazard mitigation plan in place are no longer eligible for FEMA project grant monies under programs such as the Flood Mitigation Assistance Program (FMA), Hazard Mitigation Grant Program (HMGP) and Pre-Disaster Mitigation Grant Program (PDM).

PARTICIPATION

Jurisdictions that are located within Nassau County who wish to be recognized by FEMA as being compliant with

DMA 2000 must either: (a) participate with the County in the multi-jurisdictional plan development process and formally adopt the final plan, or (b) prepare their own hazard mitigation plan.

All jurisdictions in Nassau County are invited to participate in the process. To date, not all have expressed



ON THE north shore of Bayville after a 1992 nor-easter.

an interest in participating. Active participation in the process is the only way a jurisdiction can be seen in FEMA's eyes as a 'participating jurisdiction' that has met the requirements of DMA 2000 and is therefore eligible to apply for Federal funds for hazard mitigation projects. Participation includes attending meetings, providing feedback and reaching out to the public and other key stakeholders in the community, and adopting the final plan.

Participation has other advantages as well:

- Because Nassau County has hired a consultant to conduct the analyses and author the plan,

participation involves relatively little effort on the part of jurisdictions.

- Because Nassau County has received Federal grant monies to develop the plan, participation involves no cost to local jurisdictions - only allocation of staff time to participate in the process.
- Multi-jurisdictional hazard mitigation plans are practical for addressing issues that do not recognize political boundaries.
- Over time, implementation of the plan will reduce economic damages resulting from future natural disasters.



LONG BEACH residence between Maryland and Indiana Avenues toppled by the storm of September, 1944.

STRUCTURE

Elected and appointed government officials, business leaders, volunteers of non-profit organizations, citizens, and other stakeholders who choose to participate are part of our overall Nassau County Multi-Jurisdictional Hazard Mitigation Planning Group.

To keep meeting sizes to workable numbers, the Planning Group has been broken up into a Core Planning Group and three Area Assessment Teams.

The Core Planning Group (CPG) includes representatives of Nassau County, the three towns, two cities, the Village Officials Association, and key stakeholders such as KeySpan. The CPG manages the overall plan formulation activities and contributes to the decision making process. Representatives on the CPG coordinate the plan efforts by organizing outreach by means of a team concept through the Area Assessment Teams (AATs).

The three AATs include representatives from the municipalities within the geographical boundaries of Hempstead, North Hempstead and Oyster Bay. The AATs are responsible for local community involvement in the multi-jurisdictional mitigation plan.

Regardless of team, all participating jurisdictions must:

- Coordinate and facilitate local efforts.
- Attend meetings.
- Provide information and feedback.
- Involve the public and community stakeholders in the planning process.
- Assess mitigation alternatives.
- Select a course of action to be followed for their communities.
- Implement the plan and monitor its progress.

PROCESS

- Research a full range of natural hazard events.
- Identify subset of significant hazards; these will be focus of the plan.
- Identify location and extent of hazard areas.
- Identify assets located within hazard areas.
- Characterize existing and potential future assets at risk.
- Assess vulnerabilities to the identified hazards.
- Evaluate and prioritize:
 - Goals
 - Objectives
 - Mitigation actions.
- Implement the Plan and monitor Plan progress.

SCHEDULE

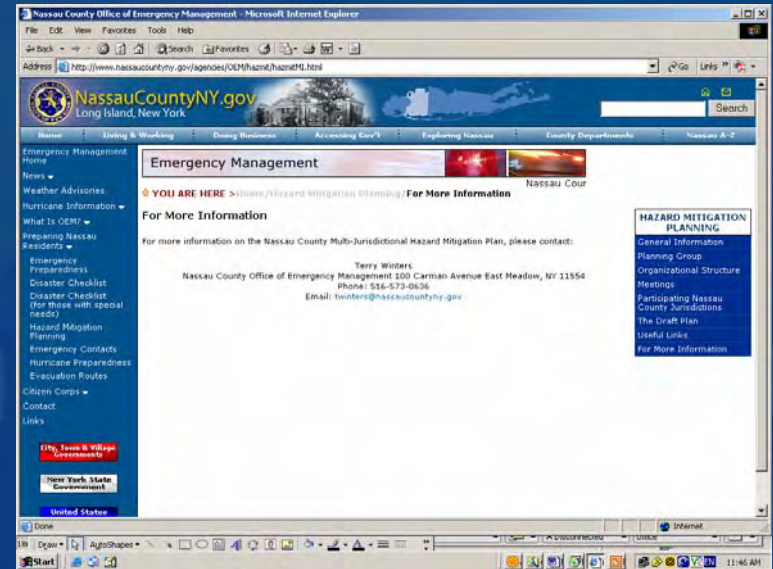
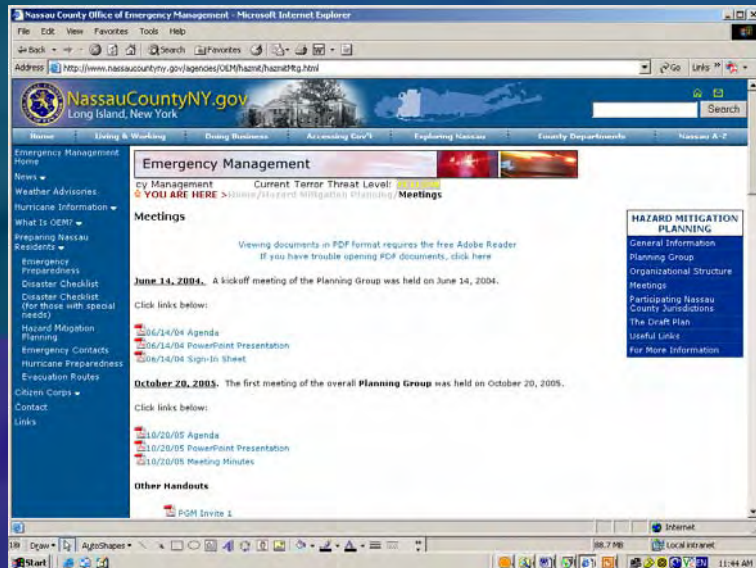
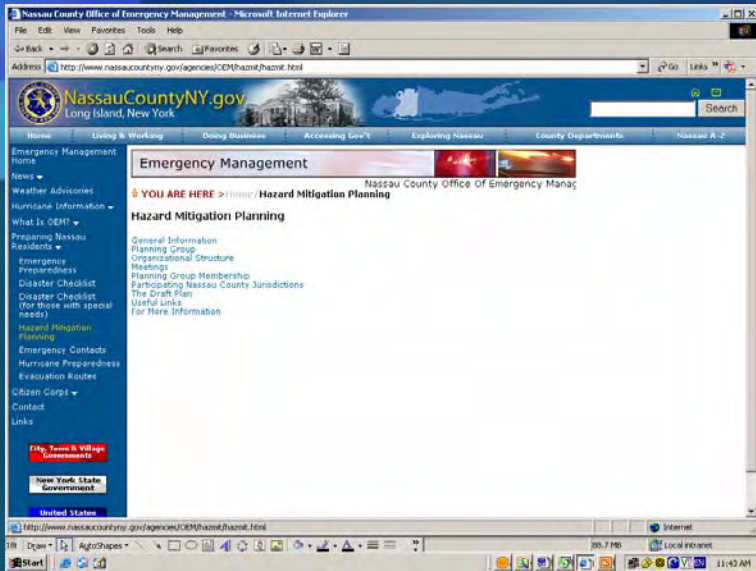
A Draft Plan will be completed and distributed for comments in the Spring of 2006. The current target date for the Final Plan (approved by FEMA and adopted by participating jurisdictions) is October 2006.

FOR MORE INFORMATION

Terry Winters
Director of Emergency Planning
Nassau County Office of Emergency Management
Phone 516-573-0636
Fax 516-573-0673
twinters@nassaucountyny.gov

WEBSITE

<http://www.nassaucountyny.gov/hazmit/CPG/index.html>



**NASSAU COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLANNING PROJECT
DOCUMENT REPOSITORIES**

Location	Address	Phone
Farmingdale Public Library	116 Merritts Road Farmingdale, NY 11735	516-249-9090
Glen Cove Public Library	4 Glen Cove Avenue Glen Cove, NY 11542-2885	516-676-2130
Hicksville Public Library	169 Jerusalem Avenue Hicksville, NY 11801	516-979-1417
Levittown Public Library	1 Bluegrass Lane Levittown, NY 11756-1292	516-731-5728
Long Beach Public Library	111 West Park Avenue Long Beach, NY 11561	516-432-7201
Long Beach Public Library	868 West Beech Street Long Beach, NY 11561	516-432-7201
Long Beach Public Library	26B Lido Boulevard Long Beach, NY 11561	516-432-7201
Mineola Memorial Library	195 Marcellus Road Mineola, NY 11501	516-746-8488
Great Neck Public Library	159 Bayview Avenue Great Neck, NY 11023	516-466-8055

Legal Notice 14329522

Nassau County Office of
Emergency Management
Nassau County Multi-jurisdic-
tional Hazard Mitigation Plan
Coastal erosion, wave action,
flooding, and high winds are
some of the natural hazards
Nassau County municipalities
are evaluating for the Nassau
County Multi-jurisdictional Haz-
ard Mitigation Plan. Towns, vil-
lages and cities are invited to
participate and help determine
how damages can be mitigated
before natural disasters occur.
Participating localities will be el-
igible to apply to FEMA for fu-
ture mitigation project funding.
Outside of meeting and partici-
pation time, there is no cost to
the localities. Key stakeholders
and the public are also wel-
come. The project involves all
participating municipalities and
key stakeholders through an
overall Planning Group; Area
Assessment Teams represent-
ing participants in the Hemp-
stead, North Hempstead and
Oyster Bay geographic areas;
and a Core Planning Group to
act as the lead working group.
To learn more, or to find out how
you can become involved,
please visit our web site on line
at <http://www.nassaucountyny.gov/agencies/OEM/hazmit/hazmit.html> or call Terrence
Winters, Nassau County Office
of Emergency Management, at
516-573-0636.

NEWSDAY PROOF

Customer: OMNI CONSULTING, INC.

Contact: JUDITH FISCHER Phone: 6314734826

Ad Number: 14329522 Start Date: 02/02/2006 End Date: 02/02/2006 Times: 1



Key Steps In The Process

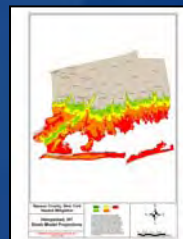
- Researching a full range of natural hazard events to determine which were the most prevalent;
- Identifying the location and extent of hazard areas;
- Identifying assets located within these hazard areas;





Key Steps In The Process

- Characterizing existing and potential future assets at risk;
- Assessing vulnerabilities to the most prevalent hazards; and
- Evaluating and prioritizing goals, objectives, and mitigation actions to reduce or avoid long-term vulnerabilities to the most prevalent hazards.



RISK ASSESSMENT: HAZARD PROFILE

million in damages and six injuries. A summary of information available on all six events is presented in Table 15.

Table 15
Tornadoes Reported in Nassau County
(Source: NOAA/NCEP Storm Data, available for the period January 1, 1970, to June 30, 2007)

Date	Location	Time	Number of Deaths	Number of Injuries	Property Damage (\$)	Crop Damage (\$)	Maximum Wind Speed (mph)	Length (miles)	Width (miles)
09/27/76	Long Beach	Day	0	0	\$250,000	\$0	F2	1 mile	77 yards
09/18/77	Selden	Day	0	0	\$0	\$0	F2	2 miles	107 yards
09/15/78	Belgrade	Evening	0	0	\$1,000	\$0	F0	1/4 mile	1/4 mile
08/12/78	Plattsburgh	Evening	0	0	\$0,000	\$0	SF6	1/4 mile	1/4 mile
07/23/80	St. Lawrence	Day	0	0	\$0	\$0	F1	1/4 mile	1/4 mile
08/07/88	Village of Larchmont	Day	0	0	\$1,000,000	\$0	F3	1/4 mile	100 yards
Total			0	0	\$1,250,000	\$0			

Notes: NOAA's National Climatic Data Center provides data on the date, time, location, and damage reported for the event. The event was recorded by the local (or the county) meteorological office.



Key Plan Sections

■ Introduction

- Plan Purpose
- Overview of Nassau County
- Summary Plan Development Process
- Document Organization
- Key Terms



Key Plan Sections

■ Identification of Potential Hazards

- Evaluation of a full range of natural hazards
 - Hazards identified for inclusion & why
 - Hazards not identified & why not



- Landslides
- Drought
- Hurricanes





Key Plan Sections

■ Risk Assessment

■ Hazard Profiles

- Description of hazard
- Location of hazard area
- Extent (magnitude or severity)
- Previous occurrences
- Probability/likelihood of future occurrences



Key Plan Sections

■ Risk Assessment

■ Identification and Characterization of Assets in Hazard Areas

- Quantifies what is at risk

- Five key types of assets considered:

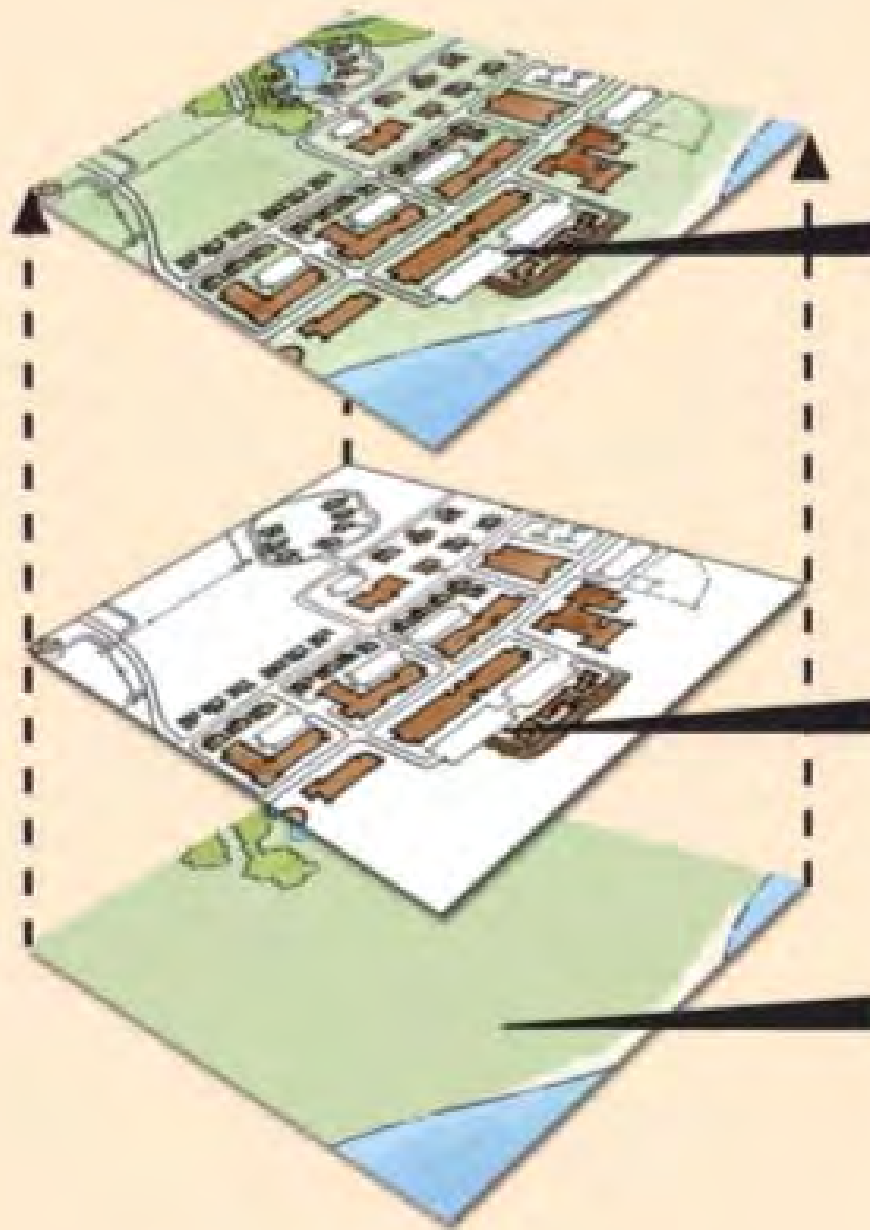
- Improved property
- Emergency facilities
- Utilities
- Historic & cultural resources
- Population



GIS

Hazard Mitigation Planning - GIS as a tool to:

- ◆ Inventory Assets
 - ◆ Community-wide vs. hazard area
 - ◆ Number of buildings
 - ◆ Value of buildings
 - ◆ Number of people
- ◆ Identify Hazard Exposure



A map showing the location of the community's assets can be produced...

... by overlaying the base map for the community...

... with a map delineating hazard area boundaries.



Key Plan Sections

■ Risk Assessment

■ Damage Estimates

- Data limitations
- Actions to improve data are part of the plan, so limited resources can be allocated wisely
- Qualified damages (not quantified)



Key Plan Sections

■ Risk Assessment

- Existing Land Uses and Future Development Trends in Hazard Areas
 - Where is new development planned?
 - How much of this is in hazard areas?
 - Are there codes/regulations in place to provide a certain degree of protection from the most frequent events?



Key Plan Sections

■ Capabilities and Resources

- Plans, codes, and ordinances currently in place
- Can contribute to, or be utilized for, hazard mitigation
- Villages, Towns, County, State, Federal



Key Plan Sections

■ Mitigation Goals

- Promote disaster-resistant development
- Build and support local capacity to enable the public to prepare for, respond to, and recover from disasters
- Reduce the possibility of damage and losses due to the various hazards



Key Plan Sections

■ Range of Alternative Mitigation Actions Considered

■ *Including, but not limited to:*

- Public education/outreach
- Zoning/land use changes
- Structural retrofits (i.e., hurricane clips, structure elevation, storm shutters, etc.)
- Roadway elevations/backflow valves/drainage improvements
- Tree trimming



Key Plan Sections

■ Action Item Evaluation and Prioritization

- Participating jurisdictions each selected action items for their community.
- “STAPLE+E” Evaluation – Qualitative evaluation of a project’s Social, Technical, Aministrative, Political, Legal, Economic, and Environmental costs and benefits.
- Priorities for each selected action assigned based on overall benefits and costs (high/medium/low).



Key Plan Sections

■ Implementation Strategy

- Hazard(s) the action addresses
- Order of magnitude costs
- Primary agency responsible
- Mechanism for implementation
- Target Date
- Funding Source



Draft Plan – Review Cycle

- Draft Plan Submitted to NYSEMO 06/13/06
 - Draft Plan Mailed to Repositories 07/18/06
 - Draft Plan Posted on NCOEM Website 07/20/06
 - NYSEMO Comments Received 07/24/06
-
- Final Plan Must Be Approved By FEMA 10/20/06



To Review a Copy of the Draft Plan

■ Document Repositories

Farmingdale Public Library, Glen Cove Public Library, Hicksville Public Library, Levittown Public Library, Long Beach Public Library (3 branches), Mineola Memorial Library, and Great Neck Public Library.

■ Web Site

www.nassaucountyny.gov/agencies/OEM/hazmit/hazmitDP.html



To Submit Comments On the Draft Plan

■ Email

twinters@nassaucountyny.gov

■ Post

Terry Winters, Hazard Mitigation Coordinator
Nassau County Office of Emergency Management
100 Carman Avenue
East Meadow, New York 11554



Final Plan

- Comment incorporation
- FEMA will review modifications and approve the Final
- Participating jurisdictions will adopt the Final
- Targeted for completion October 2006



Plan Maintenance

- Final Plan is a 'living document'
- 5-year review cycle
- Assess effectiveness and status
- Reflect any changes that may affect mitigation priorities

URS



Plan Maintenance

- Annual Work Progress Monitoring Reports
- Annual Plan Evaluation Meetings
- Update Appraisal (at 3.5 yr point of each 5 yr cycle)
- Public participation
 - Document repositories
 - Web site
 - Annual fact sheet
 - Survey
 - Meetings with civic associations
 - Etc...

Questions and Answers

